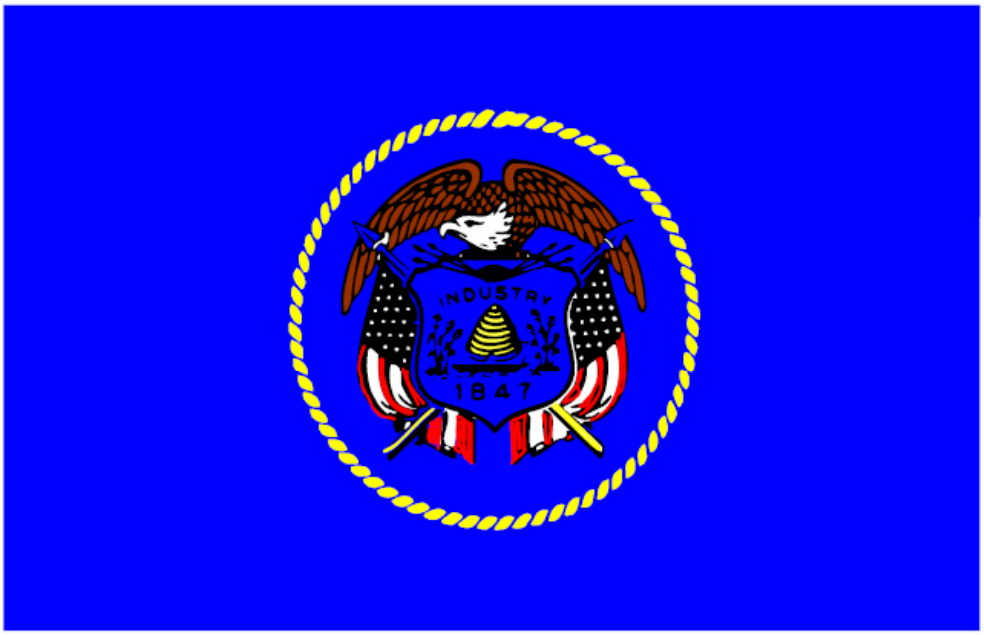
FY06 as of April 2005

Green River Test Site



Installation Action Plan

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FY2006

GREEN RIVER
TEST SITE
Utah
INSTALLATION ACTION PLAN

Printed April 2005

Statement of Purpose

The Defense Environmental Restoration Program (DERP) was established by Section 211 of the Superfund Amendments and Reauthorization act (SARA) of 1986. The Installation Restoration Program (IRP) and Military Munitions Response Program (MMRP) are sub-programs of the DERP. The IRP was established to cleanup environmentally contaminated sites belonging to Department of Defense (DOD) installations. Generally, sites contaminated prior to October 17, 1986 are eligible for funding under the DERP. (The date is the date the DERP was established via passage of the SARA.) Specific funding for DOD installations are directly appropriated to each DOD department (or component) into what are known as Component Environmental Restoration accounts. For the Army, this account is known as the ER,A.

The purpose of the Installation Action Plan (IAP) is to outline the complete, multi-year IRP for a particular installation. The plan identifies an installation's environmental cleanup requirements, by site, and proposes a comprehensive approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

As stated previously, the IRP is specifically focused at contamination resulting from past activities and is funded by the centrally-managed ER,A budget account. Cleanup activities directed at contamination primarily resulting from current operations are separately funded and managed, and, although mentioned where relevant, will not generally be discussed in detail in this IAP.

In an effort to coordinate planning information between the IRP manager, U.S. Army Environmental Center, installations, executing agencies, regulatory agencies, and the public, an IAP has been completed for Green River Test Site (GRTS) which is managed by White Sands Missile Range (WSMR). The IAP is used to track requirements, schedules and budgets for all major Army installation restoration programs.

All site specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change. Under current project funding, all remedies will be in place at GRTS by early Fiscal Year (FY) 2006.

The following agencies contributed to the formulation and completion of this Installation Action Plan:

Engineering & Environment Inc./AEC

White Sands Missile Range

US Army Environmental Center

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Acronyms & Abbreviations

ABRES	Advanced Ballistic Re-Entry System
AEDB-R	Army Environmental Database – Restoration
AMC	Army Materiel Command
AOC	Area of Concern
ARAR	Applicable, Relevant, and Appropriate Requirements
ARC	Atlantic Research Corporation
ATEC	U.S. Army Test and Evaluation Command
bgs	below ground surface
BLM	Bureau of Land Management
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Env Response, Compensation, and Liability Act
cm	centimeters
DD	Decision Document
DERP	Defense Environmental Restoration Program
DOD	Department of Defense
DOE	Department of Energy
DSERTS	Defense Site Environmental Restoration Tracking System
DTC	U.S. Army Developmental Test Command
EPA	Environmental Protection Agency
ft	feet
FBDU	Ford, Bacon, and Davis, Utah, Inc.
FUSRAP	Formerly Utilized Site Remedial Action Program
FY	Fiscal Year
gal	gallons
GRTS	Green River Test Site
ha	hectares
IAP	Installation Action Plan
in	inches
IRP	Installation Restoration Program
km	kilometers
L	liters
LTM	Long Term Monitoring
m	meter
mg/kg	milligram per kilogram
mi	mile
MMRP	Military Munitions Response Program
MSC	Major Subordinate Command
NPL	National Priority List
PA	Preliminary Assessment
PCB	Polychlorinated Biphenyl
POL	Petroleum/Oil/Lubricants
ppm	parts per million
RA	Remedial Action
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act

Acronyms & Abbreviations

RD	Remedial Design
REM	Removal
RI/FS	Remedial Investigation/ Feasibility Study
RRSE	Relative Risk Site Evaluation
SARA	Superfund Amendments and Reauthorization Act
SI	Site Investigation
SSL	Soil Screening Level
SWMU	Solid Waste Management Unit
SVOC	Semi-Volatile Organic Compounds
TAL	Target Analyte List
TAPP	Technical Assistance for Public Participation Program
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
U_3O_8	Uranium Oxide
UCC	Union Carbide Corporation
UDEQ	Utah Department of Environmental Quality
UMTRA	Uranium Mill Tailings Remedial Action
USACHPPM	US Army Center for Health Promotion and Preventive Medicine
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
WSMR	White Sands Missile Range
yd^3	Cubic Yards

Installation Information

INSTALLATION LOCALE: The GRTS (Figure 1), also known as Green River Launch Complex, is located in Grand County, Utah on over 3,450 acres of land. It is approximately 1.2 miles (mi) southeast of the town of Green River, Utah on State Highways 6 and 191, and Interstate 70. The site is about 50 mi northwest of Moab, Utah and is approximately 70 mi west of the Utah-Colorado border. The Green River borders GRTS on the west (Figure 2). The site originally consisted of a cantonment area; two launch complexes, magazine storage area, and property for missile abort and booster fallout. Most of this property is currently leased from the Bureau of Land Management (BLM) or the State of Utah. The missile abort and booster fallout areas originally added approximately 732,600 acres of land to the Site.

INSTALLATION MISSION: WSMR (and GRTS as an extension of WSMR) provides Army, Navy, Air Force, DoD, and other customers with high quality services for experimentation, test, research, assessment, development, and training in support of the Nation at war.

COMMAND ORGANIZATION:
- WSMR
- IMA-Southwest Regional Office

REGULATOR PARTICIPATION:
- U.S. Environmental Protection Agency (EPA), Region VIII, Denver, CO
- Utah Department of Environmental Quality (UDEQ), Salt Lake City, Utah

NPL STATUS:
The GRTS was placed on the Federal Agency Hazardous Waste Compliance Docket on 27 June 1997. The site is not listed on the National Priority List.

RAB/TRC/TAPP STATUS: There is no formal RAB for GRTS. WSMR will continue with a proactive public relations program that includes publication of informative articles in local newspapers, meeting with city officials, and hosting public meetings as necessary. Completion of the GRTS IRP is scheduled for early FY06; therefore, there is little to no need for a RAB or public interest survey to establish a RAB.

Installation Information

PROGRAM SUMMARIES:

IRP

Contaminants of Concern: Metals, Petroleum Hydrocarbons, Volatile Organics, Perchlorates and Solvents
Media of Concern: Soil, Groundwater, Surface Water, Sediment
Estimated date for RIP/RC: 2005
Total Year to Date Funding : $3,097,922
CTC: $0

MMRP: There are no BRAC sites at Green River Test Site

BRAC: There are no BRAC sites at Green River Test Site

Installation Location Map

Detail Map

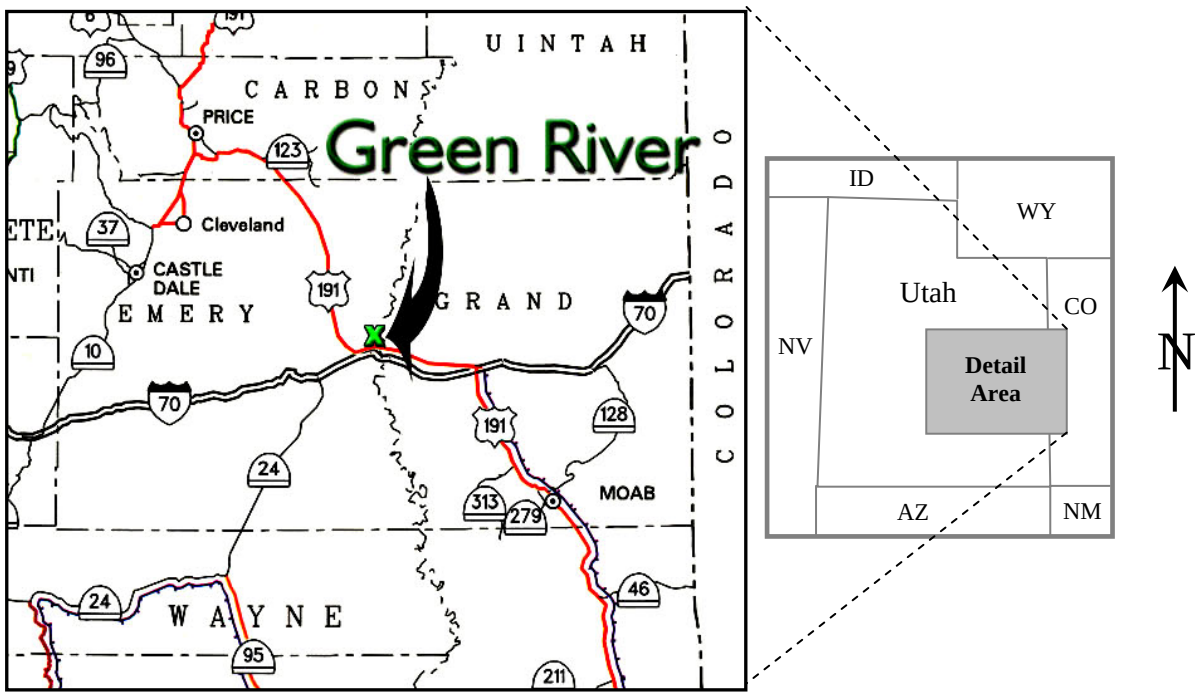

Figure 1. Green River Test Site Location

Cleanup Program Summary

HISTORIC ACTIVITY: GRTS is an inactive satellite installation of White Sands Missile Range. It was acquired by the Government in 1961 to support the Advanced Ballistic Re-Entry System (ABRES), which was under development by the Air Force Systems Command. The ABRES program management and missile assembly were contracted to Atlantic Research Corporation (ARC), a subsidiary of Union Carbide Corporation (UCC). Under this program, Athena Research missiles were launched from GRTS and impacted on WSMR. The last Athena missile was fired in 1971. Pershing production missiles were also launched from GRTS by military personnel and impacted on WSMR. The last Pershing missile was launched in 1975.

The site encompasses approximately 3,450 acres of property, comprised of both federally owned and leased property from BLM and the State of Utah. Army-owned property at the GRTS includes a cantonment area that originally consisted of temporary and semi-permanent facilities. These facilities included trailers, offices, dining facilities, storage areas, and maintenance buildings for permanent and temporary personnel stationed at the site. Several facilities were removed since the site was deactivated in 1983. Army-owned property also includes the area surrounding the sewage lagoons and the roadway corridor leading to the Athena Launch complex. Leased property includes the Athena Launch Complex, the Pershing Launch Complex, land surrounding the corridor to the Athena Launch Complex, and the roadway corridor leading to the Pershing Launch Complex.

The Athena Launch Complex is located approximately 4.5 mi southeast of the cantonment area. The complex originally consisted of a blockhouse, three launch pads, three portable climatic chambers, and meteorological facilities. The Army removed a number of the facilities following site deactivation. GRTS also maintained the Pershing Launch Complex, located approximately 5 km (3 mi) south of the cantonment area, for the launching of Pershing Missiles. Much of the cantonment area, Athena Launch Complex, and support structures for the Pershing Launch Complex have been heavily vandalized.

Land located south of the cantonment area, outside of GRTS property, was acquired in 1957 by the UCC to construct a uranium extraction mill (DOE, 1995). From March 1958 to January 1961, 183,000 tons of uranium ore removed from the Temple Mountain Mine was processed. The upgraded ore concentrate was then shipped by rail to Rifle, Colorado for further processing. As a result of these operations, 137,000 tons of tailings were generated and disseminated over 9 acres with an average depth of 7 feet (ft) adjacent to the site.

In 1962, UCC leased this area, including the buildings, to the US Air Force for use of their contractor, ARC, to assemble Athena missiles. The lease expired in 1975 following the end of the Athena testing program and the property was returned to UCC. The Department of Energy (DOE) completed remedial actions for radioactive and mixed wastes at the site in 1989.

During the ABRES program, UCC leased this area to Celesco, a company under contract with the Department of Defense (DOD), which used the mill buildings for missile mating operations. The UCC owned the uranium mill site until the State of Utah acquired ownership in 1988. Between 1988 and 1989, mill tailings and associated contaminated soils and materials were stabilized on the site in a permanent disposal cell as part of the remedial action. The areas of the former tailings pile, and all areas disturbed at the site by the remedial action, were backfilled, graded to promote surface water drainage, and re-vegetated. The site is currently being monitored according to the long-term surveillance plan for the DOE Green River, Utah disposal site (DOE, 1995).

Cleanup Program Summary

The GRTS was officially deactivated in 1983 and was maintained in a caretaker status from 1976 through 1986. During the period of 1976 to mid-1993, the City of Green River entered into leasing arrangements with WSMR to use several buildings in the cantonment area.

In 1996, the Army began investigating all potential areas of environmental concern at GRTS. As a precursor to a Preliminary Assessment (PA), twelve sites were designated as Areas of Concern (AOC) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The GRTS was then placed on the Federal Agency Hazardous Waste Compliance Docket on 27 June 1997 under CERCLA. In August 1997, the United States Army Center for Health Promotion and Preventive Medicine (USACHPPM) performed a Relative Risk Site Evaluation (RRSE) and identified twelve additional sites. Twenty sites were deemed eligible for IRP inclusion while four sites related to DOE's activities were not eligible. Furthermore, the four DOE sites (site numbers GRTS-01, 07, 09 and 12) were investigated and/or remediated under a DOE program.

Section 120(c) of CERCLA of 1980 as Amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 requires the completion of a PA, and if warranted, a Site Inspection (SI) within eighteen months of publication of the Docket. The Utah Department of Environmental Quality (UDEQ) is the lead regulatory agency with the Environmental Protection Agency (EPA) Region VIII office providing supplementary input. EPA/UDEQ approved the Final PA in April 2001. Fieldwork for the SI was begun in October 2001 and completed in April 2002. Following receipt of data, WSMR, UDEQ, and EPA met several times to review data and develop the SI Report. The results of the SI are summarized in the regulatory approved Final SI Report dated October 2003. WSMR presented the results of the SI to the City of Green River in the form of a public meeting on 13 November 2003 and a copy provided for public review at the City of Green River Public Library.

Based on the results of the SI, removal actions are required at six locations. The basis for these actions was either the identification of soil contamination or buried waste requiring removal and proper disposal. The removals were executed during CY2004.

CURRENT ACTIVITY: Currently, finalization of the Athena Launch Complex (ALC) risk assessment and site closeout activities remain to be completed. Both these tasks are underway. The ALC is associated with site GRTS-05 and all but two monitoring wells remain to be abandoned. Other site closeout activities include finalization of completion reports and final status reports. Completion of these activities is expected by the end of 2005.

PROGRAM PROGRESS:

IRP: All 4 IRP sites (GRTS-05, 10, 13 and 16) are being closed out during FY05

MMRP: There are no MMRP sites at the Green River Test Area

BRAC: There are no BRAC sites at the Green River Test Area

GREEN RIVER TEST SITE

INSTALLATION RESTORATION PROGRAM

IRP Summary

AEDB-R SITES/SITES RC: 24/20

AEDB-R SITE TYPES:

1 Fire/Crash Training Areas	2 Contaminated Buildings	1 Contaminated Sediments
2 Industrial Discharges	2 Contaminated Soil Piles	3 Landfills
1 Maintenance Yard	1 POL Lines	6 Storage Areas
1 Pistol Range	1 Washrack	1 Underground Storage Tank
2 Surface Impoundments/Lagoons		

CONTAMINANTS OF CONCERN: Metals, Petroleum Hydrocarbons, Volatile Organics, Perchlorates and Solvents

MEDIA OF CONCERN: Soil, Groundwater, Surface Water

COMPLETED REM/IRA/RA:
- REM-GRTS-01, Tailing Pond/Pile at Old Milling Plant (by DOE, 1988)
- REM-GRTS-02, UST Containment Area (1990)
- REM-GRTS-05, Pershing Booster Burial Site (2004)
- REM-GRTS-07, Former Ore Bins (by DOE, 1988)
- REM-GRTS-08, Waste Oil Storage (1996)
- REM-GRTS-09, Uranium Ore Milling Plant (by DOE, 1988)
- REM-GRTS-10, Former Fire Training Pit (2004)
- REM-GRTS-12, Wind Blown Contamination (by DOE, 1988)
- REM-GRTS-13, Landfill/Dump/Disposal Pit (2004)
- REM-GRTS-16, Pistol Range (2004)
- REM-GRTS-17, Motor Pool (2004)
- REM-GRTS-20, Transformers at Athena Launch Site (1998)
- REM-GRTS-22, Computer Debris/Spent Ammo/POL Products (1998)
- REM-Various Sites, (2000)

IDENTIFIED POSSIBLE REM/IRA/RA:
None

TOTAL ER,A FUNDING:

Prior Year Funds:		3,003.8 K
Future Requirements:	$	0.0 K
Total	$	$3,003.8 K

DURATION OF IRP:

Year of IRP inception:	1997
Year of RA completion:	2005
Year of IRP completion:	2005

IRP Contamination Assessment

In response to regulatory requests, an environmental investigation was conducted at the GRTS in January 1996. Although the document was purported to be a PA, it was prepared out of sequence of the IRP and did not fulfill the requirements of a PA as defined by the EPA. Negative regulatory scrutiny of this document was largely responsible for the placement of the GRTS on the Federal Agency Hazardous Waste Compliance Docket. WSMR elected to perform a new PA, in accordance with EPA guidelines.

Subsequent efforts re-started in June 1997 with the placement of GRTS on the Docket. In September 1997, a Relative Risk Site Evaluation (RRSE) was conducted by the USACHPPM. Twelve AOC's were added to the original twelve AOCs previously identified by WSMR during the 1996 site reconnaissance.

A draft PA was completed September 1998 and was approved 27 January 2000. The final PA was approved in April 2001. The PA included a thorough analysis of the 24 identified AOCs. Four of these AOCs (GRTS-01, 07, 09, and 12) are located on the adjacent Department of Energy - Uranium Mill Tailings Remedial Action (DOE-UMTRA) site. The EPA and UDEQ concurred that these sites are located on DOE property and are not the responsibility of WSMR.

Figure 2 shows the general location and distribution of the 24 identified sites. Twenty of these sites (DOE/UMTRA) are listed as Response Complete. The GRTS sites include possible landfills, storage areas, pistol ranges, waste ponds, and vehicle maintenance areas. The primary constituents of concern included RCRA metals, petroleum hydrocarbons, volatile organics, perchlorates and solvents.

Prior to submittal of the draft PA, a number of activities took place at GRTS to secure the site from continued vandalism. This included the removal of 15 pad-mounted and 21 pole-mounted transformers. Prior to removal, dielectric fluid within each transformer was tested for the presence of polychlorinated biphenyls (PCBs). All were found to contain less than the action limit of 50 parts per million (ppm) for disposal. All were removed and disposed as non-hazardous materials. Concrete pads where transformer fluid had leaked were demolished and disposed properly.

Additionally, six underground storage tanks (UST) were removed and disposed. Two of the tanks were used to store heating oil with the remaining four used for water storage. UST removal activities included emptying the tanks prior to removal, excavation and removal of each UST, testing of the soils underlying each UST and site restoration. Approximately 25 cubic yards of non-hazardous waste and debris was collected and disposed. This included collection and disposal of the debris at GRTS-22.

Site fencing of GRTS AOC-03, -04, -05, -11, -13, -16, -17, -18, -19, -20, and –23 was completed the first quarter of FY 2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

In October/November 2001, SI fieldwork was executed at the remaining 20 AOCs determined to be the responsibility of WSMR. Soil samples were collected and monitoring wells installed.

IRP Contamination Assessment

Representatives from WSMR met with EPA Region VIII and UDEQ project managers on 15 January 2002 to discuss the GRTS CERCLA SI. Activities performed during the Fall 2001 field sampling campaign were reviewed. All agreed that the sampling campaign was conducted in accordance with the requirements in the approved SI work plan and associated documents. Results of all SI sampling were published in the Final SI Report in October 2003.

WSMR performed removal actions in FY04 at 5 IRP sites (GRTS-05, 10, 13, 16, 17) where either buried debris or soil contamination was identified.

Currently, finalization of the Athena Launch Complex (ALC) risk assessment and site closeout activities remain to be completed. Both these tasks are underway. The ALC is associated with site GRTS-05 and all but two monitoring wells remain to be abandoned. Other site closeout activities include finalization of completion reports and final status reports. Completion of these activities is expected by the end of CY2005.

CLEANUP EXIT STRATEGY:

Complete Site Closeout for the 4 remaining sites (GRTS-05, including the ALC, GRTS-10, 13 and 16).

Previous Studies

	Title	AUTHOR	DATE
1	Aerial Photographs for Green River Launch Complex, Green River, Utah	US Army White Sands Missile Range	1964, 1967, 1973, 1975
2	Utah Launch Complex Climatography, Green River, Utah	Atmospheric Sciences Research Office	1969
3	Utah Launch Complex, Green River, Utah Green River Met Site Climate Calendar	Atmospheric Sciences Laboratory	Feb-1973
4	Environmental Assessment Statement, Pershing Artillery-Ordinance Firing Program	Department of the Army Test and Evaluation Command	Sep-1973
5	Land Utilization Survey EO 11724, Utah Launch Complex, Green River Utah and Other Off Range Areas of U.S. Army White Sands Missile Range, New Mexico.	US Army White Sands Missile Range	Jun-1974
6	Utah State Information Handbook Uranium Mill Tailings Remedial Action Program	Politech Corp.	1979
7	Green River, Utah Site Information Handbook Uranium Mill Tailings Remedial Action Program	Politech Corp.	1980
8	Engineering Assessment of Inactive Uranium Mill Tailings, Green River Site	Ford, Bacon, and Davis Utah, Inc.	1981
9	Utah Launch Complex Supplement to Installation Environmental Assessment	US Army White Sands Missile Range	Aug-1981
10	Installation Assessment of Green River Test Site and Blanding Launch Area, Utah, Aberdeen Proving Ground, MD. Report Number 195.	Chemical Systems Laboratory (CSL)	1982
11	Initial Installation Assessment of Green River Launch Complex, UT	US Army White Sands Missile Range	Nov-1982
12	An Archeological Overview and Management Plan for the Green River Launch Complex	Stearns-Roger Services, Inc.	Mar-1984
13	Historic Properties Report, White Sands Missile Range, New Mexico and Subinstallation Utah Launch Complex	Building Technology, Inc.	Jul-1984
14	Update of the Initial Installation Assessment of Green River Launch Complex, UT	Environmental Science and Engineering, Inc	Aug-1988
15	Closure Notice for Three Underground Fuel Storage Tanks to the State of Utah	US Army White Sands Missile Range	1990
16	Total Petroleum Hydrocarbon Test Results for 4 Soil Samples from the Green River Launch Complex	Utility Testing Laboratory	1990
17	Ground-Water Quality Survey No. 38-26-K510-91, Evaluation of Waste Sites, Green River Launch Complex, Green River and Idaho Launch Complex, Mountain Home, Idaho	US Army Environmental Hygiene Agency	Jun-1991
18	Remedial Action Plan and Final Stabilization of the Inactive Uranium Mill Tailings at Green River, Utah. UMTRA-DOE-DE-FC04-81AL16309. Albuquerque Operations Office	Department of Energy - Albuquerque Operations Office	1991
19	Real Estate Inspection Report, Green River Launch Complex, UT	US Army White Sands Missile Range	1991
20	Baseline Risk Assessment of Ground Water Contamination at the Uranium Mill Tailings Site Near Green River, Utah	Jacobs Engineering Group, Inc.	1995
21	Preliminary Assessment - Green River Offsite Launch Complex, Utah	Technologies Associates, Inc.	Jan-1996

Previous Studies

	Title	AUTHOR	DATE
22	Preliminary Assessment, Green River Off-Site Launch Complex, Utah: Prepared for the U.S. Army Environmental Center, Contract number DAAM01-95-M-0042.	Engineering Technologies Associates, Inc.	1996
23	Letter Report to the Department of the Army, White Sands Missile Range for the Green River Launch Complex Drum Disposal, under Contract DAAD07-95-C-0125, WAO 200-CC	MEVATEC Corporation	1996
24	Human Health Media-Specific Screening Levels	US Environmental Protection Agency Region VI	1996
25	WAO No. 400-BB, Results of Preliminary Sampling Task Green River Test Site	MEVATEC Corporation	1997
26	Relative Risk Site Evaluation, Green River Launch Complex, Utah. Hazardous and Medical Waste Study No. 37-EF-7035-97	US Army Center for Health Promotion and Preventative Medicine	1997
27	Personal Communication. City of Green River, Utah	Nance, D.	1998
28	Preliminary Assessment – Green River Test Site, Utah	MEVATEC Corporation	Jun-2000
29	Final Decision Document, Motor Pool Facility (GRTS-17),U.S. Army Green River Test Site, Green River, Utah	BAE Systems	Oct-2003
30	Final Site Management Plan, U.S. Army Green River Test Site, Green River, Utah	BAE Systems	Oct-2003
31	Final Engineering Evaluation/Cost Analysis, Motor Pool Facility (GRTS-17), U.S. Army Green River Test Site	BAE Systems	Dec-2003
32	Final Work Plan Non-Time-Critical Removal Action, Motor Pool Sump (GRTS-17),U.S. Army Green River Test Site, Green River, Utah	BAE Systems	Jan-2004
33	Final Closure Report: Non-Time-Critical Removal Action, Motor Pool (GRTS-17), U.S. Army Green River Test Site, Green River, Utah	BAE Systems	Apr-2004
34	Draft Final Engineering Evaluation/Cost Analysis, Non-Time-Critical Removal Action, Pershing Booster Burial Site (GRTS-05), U.S. Army Green River Test Site, Green River, Utah	BAE Systems	May-2004
35	Final Decision Document, Athena Launch Pads and Final Remedial Action, Pershing Booster Burial Site (GRTS-05),, Installation Restoration Program U.S. Army Green River Test Site, Green River, Utah	BAE Systems	Jul-2004
36	Final Decision Document, Pistol Range (GRTS-16), Installation Restoration Program U.S. Army Green River Test Site, Green River, Utah	BAE Systems	Jul-2004
37	Final Work Plan Non-Time-Critical Removal Action, Pershing Booster Burial Site (GRTS-05), Installation Restoration Program, U.S. Army Green River Test Site, Green River, Utah	BAE Systems	Jul-2004
38	Final Work Plan, Removal at the Pistol Range (GRTS-16), Additional Investigation at the Fire Fighting Training Pit (GRTS-10) and Landfill/Dump/Disposal Pit (GRTS-13), Installation Restoration Program, U.S. Army Green River Test Site, Green River, Utah	BAE Systems	Jul-2004

GREEN RIVER TEST SITE

INSTALLATION RESTORATION PROGRAM

ACTIVE-SITE DESCRIPTIONS

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GRTS-05 (PAGE 1 OF 2)
PERSHING BOOSTER BURIAL SITE

SITE DESCRIPTION

GRTS-05 is located southeast of the cantonment area, near the metal salvage yard (Figure 3). It was used as a staging area for expended Pershing 1A missile booster components, not as a burial site. Exact dates of operation are unknown; however the site was operational during Pershing occupation of GRTS (1971 until 1975). All of the missile parts were removed following GRTS deactivation. A small amount of debris remained on the surface. This site measures approximately 200 ft by 200 ft.

Surface and subsurface 6-8 ft bgs soil samples were collected in this area by USACHPPM (1997) and analyzed for SVOCs and RCRA metals. No SVOCs were detected. Arsenic was detected at a concentration of 34 mg/kg, above the EPA Region VI Residential risk-based soil exposure concentration of 22 mg/kg.

STATUS

RRSE: Low
CONTAMINANTS: Metals, Perchlorates
MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	198106	199903
SI	200003	200312
RD	200312	200506
IRA	200004	200011
RA(C)	200403	200509

RC expected: 200509

The PA was conducted in 1998 (MEVATEC, 2000). The PA concluded that sampling and further investigation was required during the SI phase to determine the presence/absence of soil or groundwater contamination and any buried rocket boosters or other debris. EPA/UDEQ approved the final PA in April 2001. Fencing of this site was completed during FY2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

SI fieldwork was performed at GRTS-05, under CERCLA guidance, from October 23 to November 8, 2001. One investigation trench was completed in the southwest corner of the site. The trench was completed in an area of the Pershing Booster Burial Site where debris protruding from the ground was observed. All observations were photo-documented and recorded in a bound field logbook. No analytical samples were collected from the trench. Twelve 10-ft soil borings were advanced by hollow-stem auger in the former Pershing booster staging area. Soil samples were collected from each boring at the surface and at 5-ft intervals to a total depth of 10 ft and analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, Explosive compounds, Perchlorate, TPH, Dioxins, Furans, and Selected Radionuclide.

Additionally, two monitoring wells were installed on the perimeter of AOC-05. Soil samples were collected from each well boring at the surface and at 5 ft intervals to a depth of 15 ft and are were analyzed for the constituents listed above. In April 2002, groundwater samples were collected from GRTS-05 and analyzed for: Appendix IX List, Explosive compounds, Perchlorate, TPH, Dioxins, Furans, Nutrients, and Physical Characteristics.

PERSHING BOOSTER BURIAL SITE

SITE DESCRIPTION

Results of the SI indicated no contamination exists above human health and ecological screening levels at the Pershing Booster Burial Site. However an October 2002 geophysical survey of this site identified approximately ½ acre of buried debris.

In July 2004, excavation and waste removal fieldwork began and was completed by August 2004. The majority of waste was inert missile debris. Approximately 750 cubic yards of soil and waste debris were excavated from the suspected area. This amount differed greatly from planning estimates of 1,800 yd^3. Of the excavated soil and debris, and following screening, approximately 270 tons of waste debris was separated and transported to a subtitle D disposal facility in East Carbon, UT. An additional 400 yd^3 of soil and waste debris were excavated from a burial pit within the presumed confines of GRTS-05. The debris was removed for disposal and the screened soil used as backfill. During excavation activities, a small cache of one-pound bags of anhydrous ferric chloride was unearthed. Approximately 300 bags were identified, containerized along with soil visually impacted by the chemical and disposed of at the Clean Harbor Grassy Mountain Subtitle C disposal facility as hazardous waste.

Based on visual observations of site personnel, all buried debris was identified, excavated and disposed at the appropriate disposal facility. To minimized soil erosion by storm water events, the site was revegetated in November 2004. The final closure report for these activities is scheduled for May 2005.

Following completion of the SI, GRTS-05 was administratively expanded to include a portion of the Athena Launch Complex containing minor surface soil contamination. The Athena Launch Complex (ALC), located approximately 4.5 miles southeast of the Pershing Booster Burial Site, was the launch point for Athena missiles. The complex contains three launch pads, a blockhouse, and several ancillary buildings. Sampling during the SI identified concentrations of metals (antimony, arsenic, cadmium, iron, and lead) exceeding human health and ecological SSLs in the surface soil (ditches) surrounding each of the three launch pads and in sediment within “concrete troughs” on each launch pad.

A baseline risk assessment (BRA) was completed during FY04 for the ALC. The final BRA report is currently under regulatory review. No human health risk was identified and only a minor ecological risk was concluded. Regulatory approval of the BRA and no future actions are anticipated.

CLEANUP STRATEGY

Following regulatory review of the BRA, only administrative items remain including site close activities. The abandonment of one monitoring well associated with the Athena Launch Complex (refer to the GRTS-11 site description) will be accomplished during FY2005. No future funding is required.

GRTS-10 (PAGE 1 OF 2)
FORMER FIRE TRAINING PIT

SITE DESCRIPTION

Site GRTS-10 is the former fire fighting training pit (Figure 3). Dimensions and the exact location of the pit are unknown. During the period from 1963-1968, waste oils were burned for fire training in a concrete-lined pit. The pit was subsequently removed in 1968 (CSL, 1982). Final disposition of debris removed from the site is unknown. Potential contaminants of concern for this site included VOCs, SVOCs, and RCRA metals.

Surface and subsurface 6-8 ft bgs soil samples were collected by USACHPPM (1997) in the general vicinity of the former training pit. Samples were analyzed for VOCs, SVOCs and, RCRA metals. No VOCs or SVOCs were detected. The only detected RCRA metal was arsenic at 5.2 mg/kg, well below the EPA Region VI Residential risk-based exposure concentration of 22 mg/kg.

STATUS

RRSE: Low
CONTAMINANTS: VOCs, SVOCs, RCRA Metals
MEDIA OF CONCERN:
Soil

PHASES	Start	End
PA	198106	199903
SI	200003	200312
RD	200312	200402
RA(C)	200402	200509

RC expected:200509

The PA for GRTS-10 was conducted in 1998 (MEVATEC, 2000). The PA concluded that additional soil and groundwater sampling was required under the SI phase to determine the presence or absence of contamination.

The SI fieldwork was performed, under CERCLA guidance, from October 24 to November 9, 2001. Seven soil borings were advanced by hollow-stem auger across the former fire fighting training pit. Soil samples were collected from each soil boring at the surface and at 5-ft. intervals to total depth of the boring. Total depths ranged from 12.0 to 20.0 ft. Soil samples collected from GRTS-10 were analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, TPH, Dioxin, Furan.

Additionally, one monitoring well was installed adjacent to the southwest corner of the former fire fighting training area adjacent to the cantonment area perimeter fence. Soil samples were collected from each soil boring at the surface and at 5-ft intervals to a total depth of 18.5 ft bgs and analyzed for the constituents listed above. Groundwater samples were collected in April 2002 and analyzed for: Appendix IX List, Explosive compounds, Perchlorate, TPH, Dioxins, Furans, Nutrients, and Physical Characteristics.

Results of the SI indicated no contamination exists above human health or ecological screening levels. However, an October 2002 geophysical survey of the area raised concerns of the possible presence of buried non-metallic material. Furthermore, while driving the drill rig near the site during drilling, the ground collapsed revealing buried metallic debris in the far southwestern portion of this site. Results are included in the final, approved SI Report completed in October 2003.

GRTS-10 (PAGE 2 OF 2)
FORMER FIRE TRAINING PIT

SITE DESCRIPTION

Test trenching occurred during July/August 2004. Multiple trenches were completed with no material identified. All trenches were backfilled and graded to restore original surface profile. The final closure report for these activities is scheduled for May 2005.

CLEANUP STRATEGY

During FY05, conduct site closeout (documentation) under the RA Phase including final site closure report. No future funding is required.

GRTS-13 (PAGE 1 OF 2)
LANDFILL/DUMP/DISPOSAL PIT

SITE DESCRIPTION

GRTS-13 consisted of surface trash and debris located west of site GRTS-05, the Pershing Booster Burial Site (Figure 3). A former installation employee indicated that a pit was excavated and waste debris was dumped and burned (USACHPPM, 1997). The pit was subsequently backfilled on an unknown date. The exact nature of materials disposed in this area was unknown. Adjacent to the pit were charred remnants of approximately 0.5 yd^3 of assorted trash and debris. Contaminants of concern in this area included VOCs, SVOCs, and RCRA metals.

Surface and subsurface samples 6-8 ft bgs were collected in this area by USACHPPM (1997). The samples were analyzed for VOCs, SVOCs, and RCRA metals. No VOCs or SVOCs were detected. Concentrations of lead were reported at 640 mg/kg. The EPA risk-based soil exposure concentration was 400 mg/kg. The only other detected RCRA metal was arsenic at 5.9 mg/kg, well below the EPA Region VI Residential risk-based exposure concentration of 22 mg/kg (EPA, 1996).

STATUS

RRSE: Medium
CONTAMINANTS: RCRA Metals, VOCs, SVOCs
MEDIA OF CONCERN: Surface Soil, Groundwater

PHASES	Start	End
PA	198106	199903
SI	200003	200312
RD	200312	200403
IRA	200004	200011
RA(C)	200403	200509

RC expected:200509

The PA for GRTS-13 was conducted in 1998 (MEVATEC, 2000). The PA concluded that additional soil and groundwater sampling was required under the SI phase to determine the presence or absence of contamination and any buried waste.

Fencing at this site was completed during FY2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

Fieldwork for the SI was performed at GRTS-13, under CERCLA guidance, from October 24 to November 8, 2001. Three 15-ft soil borings were advanced by hollow-stem auger at the landfill/dump/disposal area. Soil samples were collected from each soil boring at the surface and at 5-ft intervals to total depth and analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides or aroclors, EPA TAL for metals and cyanide, TPH, Dioxins, and Furans.

Additionally, one monitoring well was installed adjacent to the southwest corner of the landfill/dump/disposal pit area adjacent to the cantonment area perimeter fence. Soil samples were collected from each soil boring at the surface and at 5-ft intervals to a depth of 15 ft bgs, and analyzed for the analytes and compounds listed above. Groundwater samples were collected in April 2002. Groundwater samples were analyzed for: Appendix IX List, Explosive compounds, Perchlorate, TPH, Dioxins, Furans, Nutrients, and Physical Characteristics.

LANDFILL/DUMP/DISPOSAL PIT

SITE DESCRIPTION

Results of the SI indicated no contamination exists above human health or ecological screening levels. However, a geophysical survey of the area performed in October 2002 identified the possible presence of buried metallic material. Results are included in the final, approved SI report completed in October 2003.

In July and August 2004, fieldwork involving test trenching and waste removal was conducted. Two distinct waste pits were identified. Waste debris was removed from the pits and separated into five waste streams including: Waste instrumentation and paint products, containerized acid and impacted soil, small plastic containers and impacted soils, steel drums and impacted soil, and, finally, construction related debris. The debris was characterized and disposed of at an appropriate facility.

All trenches were backfilled and graded to restore the original surface profile. The final closure report for these activities is scheduled for May 2005.

CLEANUP STRATEGY

During FY05, conduct site closeout (documentation) under the RA Phase including final site closure report. No future funding is required.

GRTS-16 (PAGE 1 OF 2)
PISTOL RANGE

SITE DESCRIPTION

GRTS-16 was reported to be a former pistol range located west of site GRTS-05, the Pershing Booster Burial Site (Figure 3) (USACHPPM, 1997). Security guards on GRTS reportedly took target practice with their side arms using the hillside as a backstop (USACHPPM, 1997). Spent ammunition was observed within the hillside during the PA site reconnaissance. The sole physical evidence of a firing range was an upright wooden board, which was apparently used as a target. The wood target was removed from the site and disposed during a June 1998 site visit. Contaminants of concern at this area include RCRA metals. GRTS-16 was included within the area fenced during FY2001.

STATUS

RRSE: Low
CONTAMINANTS: RCRA Metals
MEDIA OF CONCERN:
Surface Soil, Groundwater

PHASES	Start	End
PA	198106	199903
SI	200003	200312
RD	200312	200403
RA(C)	200403	200509

RC expected:200509

Surface and subsurface 4-6 ft bgs soil samples were collected in this area by USACHPPM (1997). The samples were analyzed for RCRA metals, copper, zinc, and antimony. The only detected RCRA metal was arsenic at 4.7 mg/kg, well below the EPA Region VI Residential risk-based exposure concentration of 22 mg/kg (EPA, 1996).

The PA concluded that additional sampling was required under the SI phase to determine the presence or absence of contamination.

The fieldwork for the SI was performed at GRTS-16, under CERCLA guidance, on October 24, 2001. One shallow subsurface soil sample was collected at the approximate center of the face of the pistol range hillside. Additionally, one surface sample was collected at the base of the firing range hillside within a small drainage pathway. This material consisted of un-transported sediment or soil. Soil and sediment samples collected were analyzed for: EPA TAL for metals and cyanide, and Explosive compounds.

Results of the SI indicated no contamination exists above human health and ecological screening levels. The SI suggested that soil containing lead bullet fragments be removed to preclude future exposure. Results can be found in the final, approved SI Report completed October 2003.

In July 2004, approximately 15 yd^3 of bullet laden soil were excavated from the hillside at the pistol range. Composite characterization soil samples were taken with results indicating the soil was non-hazardous waste. The waste soil was disposed of at a commercial disposal facility in East Carbon, Utah. The excavation consisted of shallow surface scrapes off the hillside; therefore, further site restoration, such as backfilling, was deemed unnecessary. The final closure report for these activities is scheduled for May 2005.

CLEANUP STRATEGY

During FY05, conduct site closeout (documentation) under the RA Phase including final site closure report. No future funding is required.

GREEN RIVER TEST SITE

INSTALLATION RESTORATION PROGRAM

RESPONSE COMPLETE SITE DESCRIPTIONS

GRTS-01
TAILINGS POND/PILE @ OLD MILLING PLANT

SITE DESCRIPTION

GRTS-01 consists of the former uranium tailings pond/pile at the DOE-UMTRA site. EPA and UDEQ concur that this site is located on DOE property. Although this site was initially identified as an AOC, the DOE, not the Army, is responsible for all remedial actions and long term monitoring at this site. DOE excavated and buried the tailing sands on site below a protective cap in 1989 (DOE, 1991).

This site was erroneously entered into the GRTS IRP and is Response Complete.

STATUS

RRSE: NE
CONTAMINANTS: Radioactive Material
MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	198106	198106
SI	198108	198112
RI/FS	198201	198302
RD	198402	198412
RA(C)	198602	198703

RC: 198801

GRTS-02 (PAGE 1 OF 2)
UST CONTAINMENT AREA

SITE DESCRIPTION

GRTS-02 consists of a former UST area. Three 5,000 gallon tanks of unleaded gasoline were located approximately 100 ft north of Building S-50002 in the cantonment area. Notification of tank removal was submitted to the Utah Bureau of Solid and Hazardous Waste (UBSHW) on 10 May 1989. The tanks were removed in 1990 by American Geotech (Closure Notice, 1990) and the site subsequently back-filled. Tank sludge and remaining fuel was disposed in accordance with Federal and State of Utah regulations. The tanks were cleaned and disposed at the City of Green River landfill. Suspected contaminants of concern in this area included volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) associated with total petroleum hydrocarbons (TPH).

STATUS

RRSE: Low
CONTAMINANTS: VOCs, SVOCs, TPHs
MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
PA	198106	199903
SI	200003	200312
LTM	200312	200409

RC: 200312

Following tank removal, confirmatory soil samples were collected at the base of the tank excavation, below the removed fueling island, and below the location of the supply lines. Analytical results indicated no concentrations of TPH above laboratory detection limits (10 mg/kg) (UTL, 1990).

In August 1997, surface and subsurface soil samples 6-8 ft below ground surface [bgs]) were collected in the vicinity of the UST containment area by USACHPPM (1997). The samples were analyzed for VOCs, SVOCs and RCRA metals. The only detected RCRA metal was arsenic at 4.7 milligrams per kilogram (mg/kg), well below the EPA Region VI Residential risk-based exposure concentration of 22 mg/kg (USEPA, 1996).

The PA for GRTS-02 was conducted in 1998 (MEVATEC, 2000). The PA determined that although the source was removed from the site in 1989, additional confirmatory soil sampling was required to verify the absence of any residual contamination. EPA and UDEQ approved the final PA in April 2001.

Fieldwork for the SI was performed at GRTS-02, under CERCLA guidance, from October 28 to November 10, 2001. One 20-ft soil boring was advanced by hollow-stem auger at the center of the former gasoline distribution station. Soil samples were collected by split spoon from the boring at the surface then at 5-ft intervals to a total depth of 20 ft. One 5-ft soil boring was advanced by hollow-stem auger at the approximate midpoint of the distribution lines between the former UST area and the distribution station.

UST CONTAINMENT AREA

SITE DESCRIPTION

Soil samples were collected from the boring at the surface then at 5-ft bgs. Soil samples collected from the UST containment area were analyzed for: EPA Target Compound List (TCL) for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA Target Analyte List (TAL) for metals and cyanide and TPH.

Results of the SI indicated no contamination exists above human health and ecological screening levels. Results can be found in the final SI Report completed October 2003. EPA/UDEQ approved the Final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY05.

GRTS-03 (PAGE 1 OF 2)
BLDG #S-50000 FLAMMABLE STORAGE

SITE DESCRIPTION

GRTS -03 consists of Building S-50000, which was used from 1962 until 1983 to store flammable materials. The building is approximately 750 ft^2 in floor size and constructed of galvanized steel on a concrete foundation. The building is surrounded on all sides by asphalt pavement. A site inspection of the active facility in 1981 indicated storage of potentially hazardous materials. These materials included 55 gal drums of diquat-dibromide, a drum of sodium hydroxide, several cans of paint, and several drums of lubricating oils. All materials were removed during site deactivation in 1983. During the March 1998 PA site reconnaissance; no stains were identified on the concrete foundation, surrounding asphalt pavement, or soil. There are no records of previous leaks or spills. Suspected contaminants at this site included VOCs, SVOCs, and RCRA metals associated with paints, thinners and other compounds possibly used at the site.

STATUS

RRSE: Low
CONTAMINANTS: VOCs, SVOCs, RCRA Metals
MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	198106	199903
SI	200003	200312
IRA(C)	200004	200011
LTM	200312	200409

RC:200312

In August 1997, surface and subsurface soil samples 6-8 ft bgs were collected adjacent to Building S-50000 by USACHPPM (1997). No VOCs or SVOCs were detected. Concentrations of arsenic were detected at 680 mg/kg, above the EPA Region VI Residential risk-based soil exposure concentration of 22 mg/kg. The only other detected RCRA metal was lead at 147 mg/kg, well below the EPA risk-based exposure concentration of 400 mg/kg (EPA, 1996).

The PA for GRTS-03 was conducted in 1998 (MEVATEC, 2000). The PA concluded that additional soil and groundwater sampling was required under the SI phase to determine the presence or absence of contamination. EPA and UDEQ approved the final PA April 2001. Site fencing of GRTS-03 was completed during FY2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

Fieldwork for the SI was performed at GRTS-03, under CERCLA guidance, from October 24 to November 10, 2001. One 5-ft soil boring was advanced by hollow-stem auger adjacent to the vehicle loading entrance located on the east side of the Building S-50000. Soil samples were collected from the boring at the surface and at the total depth of 5-ft. Two sediment samples were collected by shovel from the north-south drainage ditch to the west of Building S-50000. Soil and sediment samples collected from GRTS-03 were analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, Perchlorate, and TPH.

BLDG #S-50000 FLAMMABLE STORAGE

SITE DESCRIPTION

One monitoring well was installed during the SI fieldwork near the southwest corner of Building S-50000. Soil samples were collected from the well boring at the surface and at 5-ft intervals to a depth of 15 ft bgs, and analyzed for the constituents listed above. Groundwater samples were collected in April 2002 and analyzed for: Appendix IX List, Perchlorate, Nutrients, and Physical Characteristics.

Results of the SI indicated no contamination exists above human health and ecological screening levels. Results can be found in the final SI Report completed October 2003. EPA and UDEQ approved the Final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Well abandonment occurred during FY04. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY05.

GRTS-04 (PAGE 1 OF 2)
SEWAGE LAGOONS

SITE DESCRIPTION

GRTS-04 consists of three sewage surface impoundments (lagoons) that operated from 1962 until deactivation of the site in 1983. The lagoons are located southwest of the cantonment area and are oriented north to south. The southern-most lagoon was constructed to collect overflow from the two northern-most lagoons, but was reportedly never used (CSL, 1982). The lagoons were reportedly constructed with bentonite (clay) liners (CSL, 1982). Each lagoon measures approximately 100 ft by 100 ft by 8 ft deep. Sewage treatment consisted of algal growth providing decomposition of sanitary wastes generated at the cantonment area (ETA, 1996). Available records indicate no sludge was ever removed from the lagoons (CSL, 1982).

STATUS

RRSE: Low
CONTAMINANTS: RCRA Metals, Cyanides, Nitrates, VOCs, SVOCs
MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
PA	198106	199903
SI	200303	200312
IRA	200004	200011
LTM	200312	200409

RC:200312

Vegetation is thick at the base of the lagoons and there is abundant evidence of wildlife feeding in this area. There is no documented evidence of a release into Browns Wash or Green River. Contaminants of concern at this area included SVOCs, RCRA metals, nitrates, and cyanide.

Surface and subsurface soil samples 2-3 ft bgs were collected from the bottom of the lagoons by USACHPPM (1997). The samples were analyzed for VOCs, SVOCs, and RCRA metals. The only detected RCRA metals were arsenic at 5.8 mg/kg, lead at 106 mg/kg, and mercury at 3.1 mg/kg, all well below the EPA Region VI Residential risk-based exposure concentrations of 22 mg/kg, 400 mg/kg, and 23 mg/kg respectively (EPA, 1996). Approximately 840 m^3 (1100 yd^3) of dry sludge is estimated to remain within each of the two northern most lagoons.

EPA and UDEQ approved the final PA in April 2001. The PA recommended further investigation at this site (MEVATEC, 2000). Fencing was completed at this site during FY2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

The fieldwork for the SI was performed at GRTS-04, under CERCLA guidance, from October 20 to October 26, 2001. A total of nine hand auger borings were installed in the three sewage lagoons. A boring was drilled in the northern, middle, and southern portion of each lagoon. The depths ranged from 2.5 to 6.0 ft (depth to local bedrock). Soil samples were collected at the surface and at total depth and analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, Explosive compounds, Perchlorate, Total Petroleum Hydrocarbons (TPH), Nutrients, and Selected Radio nuclides.

SITE DESCRIPTION

Additionally, four monitoring wells were installed along the perimeter of the sewage lagoons. Soil samples were collected by split spoon from each well boring at the surface then at 5-ft intervals to the total depth of the well and analyzed for the constituents listed above. The total depths of the four wells ranged from 15 to 20 ft. Groundwater sampling occurred in April 2002. Groundwater samples collected from GRTS-04 were analyzed for: Appendix IX Groundwater Monitoring List, Explosive compounds, Perchlorate, TPH, Nutrients, Physical Characteristics, and Selected Radio nuclides.

Nitrate was retained as an ecological contaminant of concern for the sewage lagoons. Soil samples collected during the SI identified concentrations of nitrate ranging from 80 mg/kg to over 900 mg/kg in the surface soil of the two northern-most lagoons. Elsewhere, concentrations are dominantly less than the detection level and often less than the method detection level. Nitrate was not found to be a contaminant of concern for human exposure. Results can be found in the Final SI Report completed, and approved by EPA and UDEQ, in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Well abandonment occurred during FY04. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY05.

GRTS-06
MAGAZINE AREAS

SITE DESCRIPTION

GRTS-06 consists of Storage Magazines 9, 10 and 11 (Buildings S-50130, S-50131, and S-50133, respectively) that were used by WSMR from 1962 until 1975 for Athena missile component storage. The City of Green River used the three magazine storage buildings for miscellaneous non-hazardous materials storage during its lease of GRTS. No evidence of contamination was observed during the PA site reconnaissance. Potential contaminants of concern at this site include VOCs, SVOCs, RCRA metals, and perchlorates.

Surface soil samples were collected by USACHPPM (1997) outside of Storage Magazines 9 (S-50133) and 10 (S-50131). The samples were analyzed for SVOCs. No SVOCs were detected in any of the samples.

The PA was conducted in 1998 (MEVATEC, 2000). The PA concluded that additional soil and groundwater sampling was required under the SI phase to determine the presence or absence of contamination. EPA and UDEQ approved the draft PA on 27 January 2000. The final PA was approved in April 2001.

STATUS

RRSE: Low
CONTAMINANTS: Perchlorates, RCRA Metals, VOCs, SVOCs
MEDIA OF CONCERN:
Soil

PHASES	Start	End
PA	198106	199903
SI	200003	200312
LTM	200401	200409

RC:200312

Fieldwork for the SI was performed at GRTS-06, under CERCLA guidance, from October 24 to November 12, 2001. Four 5-ft soil borings were advanced by hollow-stem auger adjacent to and outside of the front and back vehicle doors of Storage Magazine #9 and the front vehicle doors of Storage Magazines #10-11. Soil samples were collected from each boring at the surface and at total depth of 5 ft.

Three sediment samples were collected by shovel in drainage areas/ditches adjacent to the three storage magazines, one sample collected near each magazine. Soil and sediment samples collected from GRTS-06 were analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, Explosive compounds, and Perchlorate.

One ground water monitoring well was installed south of Storage Magazine #11. Ground water samples were collected in April 2002 and analyzed for: Appendix IX List, Explosive compounds, Perchlorate, Dioxins, Furans, Nutrients, Physical Characteristics.

Results of the SI indicated no contamination exists above human health and ecological screening levels. Results can be found in the final SI Report completed October 2003. EPA and UDEQ approved the Final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Well abandonment occurred during FY04. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY05.

GRTS-07
FORMER ORE BINS

SITE DESCRIPTION

GRTS-07 is the site of former uranium ore bins used by the UCC from 1958 through 1961. EPA and UDEQ concur that this site is located on DOE property. Although this site was initially identified as an AOC, the DOE, not the Army, is responsible for all remedial actions and long term monitoring at this site. Tailing sands (slurries) with residual uranium content of approximately 0.005 percent U_3O_8 and high concentrations of sulfate and chloride salts, as well as other radioactive material (i.e. radium, thorium) were present at the site. The ore bins were then remediated and removed from the uranium milling facility in 1988 by DOE (DOE, 1991).

This site was erroneously entered into the GRTS IRP and is Response Complete.

STATUS

RRSE: NE
CONTAMINANTS: Radioactive Material
MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	198106	198201
SI	198203	198206
RI/FS	198301	198311
RD	198501	198612
RA(C)	198701	198801

RC: 198901

GRTS-08 (PAGE 1 OF 2)
WASTE OIL STORAGE

SITE DESCRIPTION

GRTS-08 consists of the former oil drum staging area. Approximately 100 gal of waste oil and antifreeze were produced annually as a result of routine vehicle maintenance. The oil was drummed and staged for disposal on pallets in this unbermed area from 1963 through 1975. A site visit conducted in September 1995 identified thirty 55 gal drums of waste oil and antifreeze staged near the Former Pistol Range (GRTS-16) and the Pershing Booster Burial Site (GRTS-05).

STATUS

RRSE: Low
CONTAMINANTS: VOCs, SVOCs, RCRA Metals
MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	198103	199903
SI	200003	200312
LTM	200401	200409

RC:200312

In January 1996, the contents of all drums were characterized, transported off-site, and disposed in accordance with the State of Utah disposal regulations, Department of Transportation manifesting regulations, and WSMR waste management and disposal requirements (MEVATEC, 1996). No ground stains or stressed vegetation were observed on surface soils during the PA site reconnaissance. Potential contaminants of concern in this area included VOCs, SVOCs, and RCRA metals.

Surface and subsurface 6-8 ft soil samples were collected in this area by USACHPPM (1997). The samples were analyzed for concentrations of VOCs, SVOCs, and RCRA metals. No VOCs or SVOCs were detected. The only detected RCRA metals were arsenic at 6.2 mg/kg, cadmium at 2.6 mg/kg, and lead at 297 mg/kg well below the EPA Region VI Residential risk-based exposure concentrations of 22 mg/kg, 38 mg/kg, and 400 mg/kg respectively.

The PA was conducted in 1998 (MEVATEC, 2000). All required clean up was performed under the PA. Based on the findings from the historical records review and observations made during the PA, there is no source area associated with this site. However, the PA concluded that additional soil and groundwater sampling was required under the SI phase to determine the presence or absence of contamination.

The fieldwork for the SI was performed at GRTS-08, under CERCLA guidance, from October 23 to November 9, 2001. Two 10-ft soil borings were advanced by hollow-stem auger within the former waste oil storage area. Soil samples were collected from each boring at the surface then at 5-ft intervals to total depth of 10 ft and analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, and TPH.

One monitoring well was installed at GRTS-08. The monitoring well was placed at the southwest corner of the AOC. Soil samples were collected from each well boring at the surface and at 5-ft intervals to a depth of 20 ft bgs and analyzed for the constituents listed above. Groundwater samples were collected in April 2002 and analyzed for: Appendix IX List, TPH, Nutrients, Physical Characteristics.

WASTE OIL STORAGE

SITE DESCRIPTION

Results of the SI indicated no contamination exists above human health and ecological screening levels. Results can be found in the SI Summary Report dated October 2003. EPA and UDEQ approved the Final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Well abandonment occurred during FY04. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY05.

GRTS-09
URANIUM ORE MILLING PLANT

SITE DESCRIPTION

GRTS-09 is an abandoned uranium processing building located on the DOE-UMTRA site. UCC operated a uranium ore milling plant at this site from March 1958 until 1961. Celesco Corp. of Alexandria, Va., a subsidiary of UCC, assembled the Athena missiles under the Air Force Contract FO-4701-72-C-0010 from 1962 to 1973, when the lease was allowed to expire at the completion of the Athena testing program.

Although this site was initially identified as an AOC, the DOE, not the Army, is responsible for all remedial actions and long term monitoring at this site. EPA and UDEQ concur that this site is located on DOE property.

This site was erroneously entered into the GRTS IRP and is Response Complete.

STATUS

RRSE: NE
CONTAMINANTS: Radioactive Material
MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	198106	198107
SI	198201	198208
RI	198304	198402
RD	198501	198602
LTM	198701	198802

RC: 198804

CONST LANDFILL AT ATHENA LAUNCH AREA

SITE DESCRIPTION

GRTS-11 consists of two piles of construction debris buried at the Athena Launch Complex. The first pile is approximately 100 ft by 50 ft and the second approximately 50 ft by 50 ft in size. The piles are located east of the access road to Launch Pad #2. The debris consists primarily of rock and soil excavated during construction of the launch pads. Approximately 560 yd^3 of soil and rock are estimated to be present in this site. No potential contaminants were observed in this area during the PA site reconnaissance. Contaminants of concern in this area include RCRA metals and perchlorates.

Surface soil samples were collected by USACHPPM (1997) in the vicinity of the piles. The samples were analyzed for SVOCs and RCRA metals. The only detected RCRA metals were arsenic at 4.2 mg/kg and cadmium at 3.2 mg/kg, well below the EPA Region VI Residential risk-based exposure concentrations of 22 mg/kg and 38 mg/kg respectively (EPA, 1996).

STATUS

RRSE: Low
CONTAMINANTS: Perchlorates, RCRA Metals
MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	198106	199903
SI	200003	200312
IRA	200004	200011
LTM	200401	200409

RC:200312

The PA was conducted in 1998 (MEVATEC, 2000). Based on the findings from the historical records review and observations made during the PA, there is no source area identified at this site. However, the PA concluded that additional soil sampling was required under the SI phase to determine the presence or absence of contamination. EPA and UDEQ approved the final PA in April 2001.

Fencing at this site was completed during FY2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

Fieldwork for the SI was performed at GRTS-11, under CERCLA guidance, from October 23 to November 8, 2001. Two soil borings were advanced by hand auger. One soil boring was advanced at the approximate center of each of the two construction debris piles. Soil samples were collected from each boring at the surface and at the total depth of 2 ft. Two sediment samples were collected from GRTS-11, one from each of the two drainages that leave each “landfill” pile. Soil and sediment samples collected were analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TAL for metals and cyanide, and Perchlorate.

One groundwater monitoring well was installed in the northwest corner of the Athena Launch Complex to determine the overall groundwater quality of the first water encountered beneath the launch complex. Since the well was installed through bedrock, no soil samples were collected for analysis.

CONST LANDFILL AT ATHENA LAUNCH AREA

SITE DESCRIPTION

The total depth of the well is 35 ft bgs. Groundwater samples were collected in April 2002 and analyzed for: Appendix IX List, Explosive Compounds, Perchlorate, Dioxins, Furans, Nutrients, and Physical Characteristics.

Results of the SI indicated no contamination exists above human health or ecological screening levels. Results of the SI can be found in the final SI Report completed in October 2003. EPA and UDEQ approved the final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Well abandonment will occur during FY05 under GRTS-05 (see GRTS-05 narrative for further explanation). Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

GRTS-12
WIND BLOWN CONTAMINATION AREA

SITE DESCRIPTION

GRTS-12 is an area that is potentially contaminated by wind-blown soil from the former millings project. The area is located north of the former missile assembly area, south of the cantonment area, and directly south of the railroad tracks. EPA and UDEQ concur that this site is located on DOE property. Although this site was initially identified as an AOC, the DOE, not the Army, is responsible for all remedial actions and long term monitoring at this site. Remedial action took place under the DOE's Formerly Utilized Sites Remedial Action Program (FUSRAP) and Public Law 95-604, Uranium Mill Tailings Radiation Control Act of 1978. The wind blown area and tailings from the Uranium mill were remediated and capped under a DOE contract in 1981.

STATUS

RRSE: NE
CONTAMINANTS: Radioactive Material
MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	198106	198108

RC: 199902

This site was erroneously entered into the GRTS IRP and is Response Complete.

GRTS-14
PILE OF DIRT/GRIT #1

SITE DESCRIPTION

GRTS-14 consists of an approximate 1 yd^3 mixture of gravel, pebbles, and sand located west of the Administration Building (S-50002) within the cantonment area. The pile appears to be pool filter media or grit chamber media. During the site reconnaissance in March 1998, representatives from the City of Green River indicated that this material was being temporarily stored and will be removed prior by the end of the year (Nance, pers. comm., 1998). Potential contaminants of concern for this site include RCRA metals.

A sample of this material was collected by USACHPPM (1997) and submitted for analysis of SVOCs and RCRA metals. The only detected RCRA metal was arsenic at 2 mg/kg, well below the EPA Region VI Residential risk-based exposure concentration of 22 mg/kg (EPA, 1996).

STATUS

RRSE: Low
CONTAMINANTS: RCRA Metals, VOCs, SVOCs, TPH
MEDIA OF CONCERN: Surface Soil, Groundwater

PHASES	Start	End
PA	198106	199903
SI	200003	200312
LTM	200401	200409

RC: 200312

The PA was conducted in 1998 (MEVATEC, 2000). Based on the findings from the historical records review and observations made during the PA, there is no source area identified at this site. However, the PA concluded that additional sampling was required under the SI phase to determine the presence or absence of contamination. EPA and UDEQ approved the final PA in April 2001.

Fieldwork for the SI was performed at GRTS-14, under CERCLA guidance, on October 24, 2001. One composite soil sample was collected from the approximate center of the pile that constitutes this AOC and analyzed for: EPA TCL for SVOCs, EPA TAL for metals and cyanide.

Results of the SI indicated no contamination exists above human health or ecological screening levels. Results are included in the final SI Report completed in October 2003. EPA and UDEQ approved the final SI in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

GRTS-15
PILE OF DIRT/GRIT #2

SITE DESCRIPTION

GRTS-15 is similar to GRTS -14. It also consists of an approximate 1 yd^3 mixture of gravel, pebbles, and sand located north of the Motor Pool Building (S-50003) within the cantonment area. The pile appears to be pool filter media or grit chamber media. The material is placed on a concrete building foundation. During the site reconnaissance in March 1998, representatives from the City of Green River indicated this material was being temporarily stored and will be removed prior to the end of 1998 (Nance, pers. comm., 1998).

A sample of this material was collected by USACHPPM (1997) and submitted for analysis of SVOCs and RCRA metals. No SVOCs were detected. The only detected RCRA metals were arsenic at 1.9 mg/kg and cadmium at 2.7 mg/kg, well below the EPA Region VI Residential risk-based exposure concentrations of 22 mg/kg and 38 mg/kg respectively (EPA, 1996).

STATUS

RRSE: Low
CONTAMINANTS: RCRA Metals,

MEDIA OF CONCERN:
Surface Soil

PHASES	Start	End
PA	198106	199903
SI	200003	200312
LTM	2000401	200409

RC: 200312

Based on the findings from the historical records review and observations made during the PA, there is no source area identified at this site. However, the PA concluded that additional sampling was required under the SI phase to determine the presence or absence of contamination. EPA and UDEQ approved the final PA in April 2001.

Fieldwork for the SI was performed at GRTS-15, under CERCLA guidance, on October 24, 2001. One composite soil sample was collected from the approximate center of the pile that constitutes this AOC. The sample collected from GRTS-15 was analyzed for: EPA TCL for SVOCs, EPA TAL for metals and cyanide.

Samples were analyzed for SVOCs and cyanide in addition to Contaminants of Concern (metals) for the site as directed by EPA and UDEQ. Results of the SI indicated no contamination exists above human health and ecological screening levels. Results can be found in the final SI Report completed October 2003. EPA and UDEQ approved the final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

GRTS-17 (PAGE 1 OF 2)
MOTOR POOL

SITE DESCRIPTION

GRTS-17 consists of the Motor Pool Building (S-50003) within the cantonment area. The building is constructed of galvanized steel on a concrete slab with asphalt pavement surrounding the entire site. The building contains four vehicle service bays, sub-grade service pits within two of the bays, a parts storage area, and a shallow sump located outside of the east wall of the building. The wood-lined sump, removed in January 2004 (BAE, 2004b), was approximately 4 ft by 4 ft by 2.5 ft in size and had a natural soil base. This sump may have received waste automotive fluids from an outfall pipe that originates at a floor drain inside the building. The exact nature of materials disposed in this area were unknown. Contaminants of concern at this site included VOCs, SVOCs, and RCRA metals.

STATUS

RRSE: Medium
CONTAMINANTS: RCRA Metals, VOCs, SVOCs
MEDIA OF CONCERN: Surface Soil, Groundwater

PHASES	Start	End
PA	198606	199903
SI	200003	200312
RD	200312	200402
IRA	200004	200011
RA(C)	200402	200409

RC: 200409

Surface and subsurface 6-8 ft bgs soil samples were collected in this area by USACHPPM (1997). The samples were analyzed for VOCs, SVOCs, and RCRA metals. No VOCs or SVOCs were detected. Concentrations of lead were detected at 514 mg/kg (the EPA Region VI Residential risk-based exposure concentration is 400 mg/kg) and arsenic was detected at 73 mg/kg (the EPA Region VI Residential risk-based exposure concentration is 22 mg/kg). The only other detected RCRA metal was cadmium at 18 mg/kg, well below the EPA Region VI Residential risk-based exposure concentration of 38 mg/kg (EPA, 1996).

WSMR collected shallow soil samples within the sump area in November 1997. These samples were submitted for analysis of VOCs, SVOCs and RCRA metals. No VOCs or SVOCs were detected. Of the metals detected, concentrations of arsenic were reported at 74.1 mg/kg, concentrations of cadmium were reported at 28.7 mg/kg, and concentrations of lead were detected at 1,170 mg/kg. Remaining metals concentrations were below EPA Region VI risk-based exposure standards. At the time, approximately 1.2 yd^3 of impacted soils were estimated to have been remaining within the sump's base.

The PA for GRTS-17 was conducted in 1998 (MEVATEC, 2000). The PA concluded that additional soil and groundwater sampling was required under the SI phase to determine the presence or absence of contamination. EPA and UDEQ approved the final PA in April 2001.
Fencing at this site was completed during FY2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

Fieldwork for the SI was performed at GRTS-17, under CERCLA guidance, from October 24 to

MOTOR POOL

SITE DESCRIPTION

November 11, 2001. Two soil borings were advanced at this AOC to a depth of 10 ft. Soil samples were collected from each soil boring at the surface and at 5-ft intervals. One composite sediment sample was collected from the bottom of the wood-lined sump. Soil and sediment samples collected were analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, and TPH.

Two monitoring wells were installed near the motor pool building. Soil samples were collected from both well borings at the surface and at 5 ft intervals to total depths of 17.5 and 20 ft. The samples were analyzed for the constituents listed above. Groundwater samples were collected in April 2002 and analyzed for: Appendix IX List, TPH, Nutrients, and Physical Characteristics.

Results from the SI identified several metals (arsenic, lead, cadmium, and molybdenum) and TPH at concentrations above human health and ecological screening levels in the sump. Sampling at the remainder of the site did not identify any contaminants above human health or ecological screening levels. Results of the SI can be found in the final SI report, which was completed in October 2003 and approved by EPA and UDEQ in October 2003.

EPA, UDEQ and WSMR agreed that elevated metals and TPH concentrations in the sump warranted complete removal of the sump and all contaminated soil. This removal action occurred in January 2004 with final disposal of excavated material occurring in February 2004.

A Decision Document for this action was prepared in October 2003 and signed by EPA and UDEQ the same month. The installation commander's signature was obtained in April 2004 (BAE, 2003a). Other related documents produced for GRTS-17 include an Engineering Evaluation / Cost Analysis, a work plan and a final closure document.

No further action is required. Well abandonment of the two groundwater monitoring wells at GRTS-17 occurred in August 2004. A closure report for work conducted in August 2004 is currently in draft form, in final review stages and should be completed by May 2005. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

GRTS-18
SALVAGE YARD

SITE DESCRIPTION

GRTS-18 is a scrap salvage yard located along the southeast boundary of the cantonment area. The site consists of a fenced yard with an area of approximately 200 ft by 200 ft used to store metal scrap for salvage. The site consisted of several tons of scrap metal, office furniture, barbed wiring, and other miscellaneous trash and debris. The exact nature of materials that were formerly staged in this area was unknown. From 1987 to 1991, the City of Green River used this site to store junk vehicles (White Sands, 1991). Small oil stains, and pieces of metal and glass were observed at the site during the PA site reconnaissance. Contaminants of concern include VOCs, SVOCs, and RCRA metals. All debris and trash were removed from the site in November 1999 and properly disposed as non-hazardous waste.

STATUS

RRSE: Medium
CONTAMINANTS: RCRA Metals, VOCs, SVOCs
MEDIA OF CONCERN: Surface Soil, Groundwater

PHASES	Start	End
PA	198106	199903
SI	200003	200312
IRA	200004	200011
LTM	200401	200409

RC: 200312

Surface and subsurface 6-8 ft bgs soil samples were collected in this area by USACHPPM (1997). The samples were analyzed for VOCs, SVOCs, and RCRA metals. No VOCs or SVOCs were detected. The only detected RCRA metals were arsenic at 9.8 mg/kg, cadmium at 4.2 mg/kg, and lead at 56 mg/kg all well below the EPA Region VI Residential risk-based exposure concentrations of 22 mg/kg, 38 mg/kg, and 400 mg/kg respectively (EPA, 1996).

The PA for GRTS-18 was conducted in 1998 (MEVATEC, 2000). The PA concluded that additional soil sampling was required under the SI phase to determine the presence or absence of contamination. EPA and UDEQ approved the final PA in April 2001.

Fencing at this site was upgraded during FY2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

Fieldwork for the SI was performed at GRTS-18, under CERCLA guidance, from October 24 to November 10, 2001. A total of fifteen soil borings were advanced by hollow-stem auger to a depth of 5 ft at various locations within the confines of the salvage yard. Soil samples were collected from each boring at the surface then at total depth.

Additionally, two sediment samples were collected in each of two drainage areas on the southern side of the AOC. Soil and sediment samples collected were analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, and TPH. Results indicated no risk associated with this site.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

PHOTO LAB/SHEET METAL/WELDING SHOP

SITE DESCRIPTION

GRTS-19 is Building S-50022, located in the cantonment area, which was formerly used as a photographic laboratory, sheet metal, and welding shop. The building also appeared to be a former vehicle maintenance shop. There are two sub-grade automotive service bays, one equipped with a grease pit. The grease pit appears to be clean with no signs of previous usage.

The building is in poor condition and, at one time, was being used by a local hotel to store miscellaneous furniture and other items. The building is constructed of galvanized steel on a concrete foundation with asphalt pavement surrounding the entire structure. A small dark room is located on the south end of the building. Photographic wastes were reportedly discharged to the sewage lagoons (CSL, 1982). No visible signs of previous leaks or spills were observed during the PA site reconnaissance. Potential contaminants of concern for this site included RCRA metals and cyanide.

STATUS

RRSE: Low
CONTAMINANTS: RCRA Metals, Cyanide
MEDIA OF CONCERN: Surface Soil

PHASES	Start	End
PA	198106	199903
SI	200003	200312
IRA	200004	200011
LTM	200401	200409

RC:200312

One surface soil sample was collected outside of the building by USACHPPM (1997) in August 1997. The sample was analyzed for RCRA metals. The only detected RCRA metals were arsenic at 4.8 mg/kg and cadmium at 5.5 mg/kg, well below the U.S. EPA Region VI Residential risk-based exposure concentrations of 22 mg/kg and 38 mg/kg respectively (EPA, 1996).

The PA for GRTS-19 was conducted in 1998 (MEVATEC, 2000). The PA concluded that additional soil sampling was required under the SI phase to determine the presence or absence of contamination. EPA and UDEQ approved the final PA in April 2001. Fencing of this site was completed during FY2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

Fieldwork for the SI was performed at GRTS-19, under CERCLA guidance, from October 24 to November 10, 2001. Four soil borings were advanced by hollow-stem auger around the perimeter of the building. The total depth of each boring ranged from 5.0 to 5.5 feet. Soil samples were collected from each boring at the surface and at total depth. Two sediment samples were collected from drainage ditches adjacent to the building. Soil and sediment samples collected were analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, and TPH.

PHOTO LAB/SHEET METAL/WELDING SHOP

SITE DESCRIPTION

Two groundwater monitoring wells were installed in the northeast corner of the cantonment area to provide background groundwater data. One well was installed at the alluvium/shale interface at a depth of 22 ft bgs. Soil samples were collected at 5-ft intervals during well installation. A soil boring for the second well was drilled to a depth of 141 ft and no significant groundwater was encountered. No soil samples were collected during drilling of this well. This second well was installed at a depth of 40.3 ft bgs where it was determined moist layer may provide the best opportunity to collect groundwater. Neither well produced groundwater during the SI.

Results of the SI indicated no contamination exists above human health and ecological screening levels. Results can be found in the final SI Report completed October 2003. EPA and UDEQ approved the final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Well abandonment occurred in August 2004. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

GRTS-20
TRANSFORMER PAD AT ATHENA LAUNCH SITE

SITE DESCRIPTION

GRTS-20 consists of a vandalized transformer station located at the Athena Launch Complex, just northeast of the Athena Blockhouse (Building S-50207). The area of concern consisted of three cylindrical transformer casings that were staged on a 10 ft by 10 ft concrete pad inside a fenced electrical substation (S-50204). Contaminants of concern at these sites included SVOCs and PCBs.

During a November 1997 site visit, transformer oil samples were collected from two of the three transformers located at S-50204. One of the casings at S-50204 was observed to be open and partially filled with dielectric fluid. The second casing at S-50204 was observed to be completely filled with dielectric fluid even though the cover was partially removed. Soil samples were collected from stained soil adjacent to the transformers at S-50204 and from stained soil adjacent to one transformer located at S-50252 (MEVATEC, 1997). No PCBs were detected in the partially open transformer casing. A low level (16 mg/kg) of one PCB compound, Arochlor 1260, was detected in the fluid from the second transformer at S-50204. This concentration was well below the regulatory disposal action limit of 50 mg/kg (50 ppm) for PCBs in transformers. Additional surface soil samples were collected from areas around the concrete pad at the aforementioned sites by USACHPPM (1997). The samples were analyzed for SVOCs and PCBs. Neither constituent was detected in the soil samples.

STATUS

RRSE: Low
CONTAMINANTS: Archlors, SVOCs
MEDIA OF CONCERN: Surface Soil

PHASES	Start	End
PA	198106	199903
SI	200003	200312
IRA	200004	200011
LTM	200401	200409

RC:200312

All required cleanup was performed under the PA. Based on the findings from the historical records review and previous site activities, there was no source area remaining at this site. However, the PA concluded that additional soil sampling was required to verify the presence or absence of soil contamination. EPA and UDEQ approved the final PA in April 2001. Fence upgrading was completed at the Athena Launch Complex during FY2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

Fieldwork for the SI was performed at GRTS-20, under CERCLA guidance, on October 23, 2001. One soil boring was completed at the approximate center of the former transformer pad location. Bedrock was reached at 1.0 ft bgs, therefore only a surface sample was collected. The soil sample collected was analyzed for: EPA TCL for SVOCs, EPA TAL for metals and cyanide, EPA TCL for pesticides and aroclors.

Results of the SI indicated no contamination exists above human health and ecological screening levels. Results can be found in the final SI Report completed October 2003. EPA and UDEQ approved the final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

GRTS-21 (PAGE 1 OF 2)
FUEL STORAGE AREAS (A & B)

SITE DESCRIPTION

GRTS-21 is a former storage area reportedly used for fuel storage and for fueling equipment during launch operations at the Pershing Launch Complex. Only two fuels were associated with Pershing units; gasoline used for vehicles and diesel used for trucks and generators. The site now consists of a vacant barbed wire fenced area approximately 1 acre in area. No evidence of soil contamination or stressed vegetation was noted during the PA site reconnaissance. Contaminants of concern in this area included VOCs, SVOCs, and RCRA metals.

Surface and subsurface 5-6 ft bgs soil samples were collected by USACHPPM (1997) and submitted for analysis of SVOCs and RCRA metals. No SVOCs were detected. The only other detected RCRA metal was arsenic at 1.5 mg/kg, well below the EPA Region VI Residential risk-based exposure concentration of 22 mg/kg (EPA, 1996).

STATUS

RRSE: Low
CONTAMINANTS: RCRA Metals, VOCs, SVOCs
MEDIA OF CONCERN: Surface Soil, Groundwater

PHASES	Start	End
PA	198106	199903
SI	200003	200312
LTM	200401	200409

RC:200312

The PA for GRTS-21 was conducted in 1998 (MEVATEC, 2000). The PA concluded that additional soil sampling was required under the SI phase to determine the presence or absence of contamination. EPA and UDEQ approved the final PA in April 2001.

Fieldwork for the SI was performed at GRTS-21, under CERCLA guidance, from October 24 to November 11, 2001. Two 5-ft soil borings were advanced by hollow stem auger, one each at the approximate center of each of the two barbed wire fenced areas (A and B). Soil samples were collected from each boring at the surface and at 5 ft bgs. Two sediment samples were collected near the two fuel storage areas (A and B). Sediment and soil samples collected were analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, TPH.

This AOC was expanded during the SI to include sampling at the Pershing Launch Complex and the Pershing Control Van Area. The Pershing Launch Complex consists of two earthen launch pads which the mobile missile launcher was positioned on for firing and an earthen blockhouse to protect personnel during firing. The Pershing Control Van area consists of a former VIP viewing building and a fenced area for storage of equipment while the Pershing unit was onsite. Surface and subsurface soil samples were collected throughout the launch complex and control van area.

FUEL STORAGE AREAS (A & B)

SITE DESCRIPTION

One groundwater monitoring well was installed at the Pershing Launch Complex, between the blockhouse and the eastern launch pad. The purpose of this well was to determine the overall quality of the groundwater beneath the launch complex. Since the well was installed through bedrock, no soil samples were collected during drilling. The total depth of the well is 56.5 ft bgs. Groundwater samples were collected in April 2003 and analyzed for VOCs and metals. The well poorly recharged and no additional groundwater could be obtained for analysis for the remaining analytes (rest of Appendix IX List, Perchlorate, Dioxins, Furans, Nutrients, and Physical Characteristics).

Results of the SI indicated no contamination exists above human health and ecological screening levels.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Well abandonment occurred in August 2004. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

GRTS-22 COMPUTER DEBRIS/SPENT AMMO/POL PRODUCTS

SITE DESCRIPTION

GRTS-22 was a small pile consisting of less than 1 yd^3 of discarded computer hardware, furniture, shot-gun shells, empty motor oil containers and miscellaneous trash and debris located southeast of the Bivouac area, along the side of a small rise.

In August 1997, one surface soil sample was collected in this area by USACHPPM. The sample was analyzed for SVOCs and RCRA metals. No SVOCs were detected. The only detected RCRA metal was arsenic at 1.2 mg/kg, well below the EPA Region VI Residential risk-based exposure concentration of 22 mg/kg (EPA, 1996). No evidence of soil contamination or stressed vegetation was observed during the PA site reconnaissance. All waste material was removed and disposed of as non-hazardous/non-regulated waste in June 1998 (MEVATEC, 2000).

STATUS

RRSE: Low
CONTAMINANTS: RCRA Metals, TPH
MEDIA OF CONCERN: Surface Soil

PHASES	Start	End
PA	199708	199903
SI	200003	200312
LTM	200401	200409

RC:200312

All required cleanup was performed under the PA. Based on the findings from the historical records review and observations made during the PA, there is no source area remaining at this site. However, the PA concluded that additional soil sampling was required to verify the presence or absence of soil contamination. EPA and UDEQ approved the final PA in April 2001.

Fieldwork for the SI was performed at GRTS-22, under CERCLA guidance, from October 28 to November 11, 2001. One 5-ft soil boring was advanced by hollow-stem auger at the approximate center of the former debris area. Soil samples were collected at the surface and at 5 ft bgs and analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TAL for metals and cyanide, and TPH.

Results of the SI indicated no contamination exists above human health and ecological screening levels. Results can be found in the final SI Report completed October 2003. EPA and UDEQ approved the final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

GRTS-23
ATHENA LAUNCH PADS - SANDBLAST WASTE

SITE DESCRIPTION

GRTS-23 consists of three piles of approximately 20 yd^3 each of sand and silty material located at the Athena Launch Complex near the Blockhouse (Building-S-50207). Each pile is located on the launch pad side of a small, three-sided steel structure and appears to have functioned as a protective berm during launch activities.

Samples of this material were collected by USACHPPM (1997). The samples were submitted for analysis of SVOCs and RCRA metals. No SVOCs were detected in any of the samples. Only reported concentrations of arsenic (24 mg/kg) and chromium (67 mg/kg) exceeded the EPA Region VI Residential risk-based soil exposure concentrations (22 mg/kg and 38 mg/kg respectively). The only other detected RCRA metal was cadmium at 8.9 mg/kg, well below the EPA Region VI Residential risk-based exposure concentration of 38 mg/kg (EPA, 1996).

STATUS

RRSE: Low
CONTAMINANTS: Perchlorates
MEDIA OF CONCERN:
Surface Soil

PHASES	Start	End
PA	199708	199903
SI	200004	200312
IRA	200004	200011
LTM	200401	200409

RC:200312

The PA for GRTS-23 was conducted in 1998 (MEVATEC, 2000). The PA concluded that additional soil sampling was required under the SI phase to determine the presence or absence of contamination.

Upgrade of the fence at the Athena Launch Complex was completed during FY2001 to limit access of unauthorized personnel and vehicles per directives from the U.S. EPA Region VIII and UDEQ.

Fieldwork for the SI was performed at GRTS-23, under CERCLA guidance, from October 21 to October 23, 2001. Three composite sediment samples were collected at this AOC, one from each sandblast waste pile. Sediment samples collected from GRTS-23 were analyzed for: EPA TCL for SVOCs, EPA TAL for metals and cyanide, Explosive compounds, Perchlorate, Dioxins, Furans.

Results of the SI indicated no contamination exists above human health and ecological screening levels. Results can be found in the final SI Report completed October 2003. EPA and UDEQ approved the final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

GRTS-24
BIVOUAC MAINTENANCE AREA

SITE DESCRIPTION

GRTS-24 consists of a large area approximately 1mi southeast of the cantonment area where troops associated with Pershing Missile Launches bivouacked in a tent city. Light vehicle maintenance was reportedly performed on site, in an area south of the tent area. Also, field latrines served the sanitary needs of the military personnel that used the former Bivouac area during testing operations at Green River. The field latrines were removed in 1974 with the elimination of Pershing personnel. Other than the concrete pads, there were no permanent or semi-permanent structures at this site. The location, number, and size of the field latrines are unknown.

STATUS

RRSE: Low
CONTAMINANTS: RCRA Metals
MEDIA OF CONCERN:
Surface Soil, Groundwater

PHASES	Start	End
PA	199708	199903
SI	200003	200312
LTM	200401	200409

RC:200312

Surface and subsurface 6-7 ft bgs soil samples were collected in this area by USACHPPM (1997). The samples were submitted for analysis for SVOCs and RCRA metals. No SVOCs were detected. The only detected RCRA metals were arsenic at 6.4 mg/kg and barium at 961 mg/kg, well below the EPA Region VI Residential risk-based exposure concentrations of 22 mg/kg and 5,300 mg/kg respectively (EPA, 1996).

The PA for GRTS-24 was conducted in 1998 (MEVATEC, 2000). The PA concluded that additional soil sampling was required under the SI phase to determine the presence or absence of contamination. EPA and UDEQ approved the final PA in April 2001.

Fieldwork for the SI was performed at GRTS-24, under CERCLA guidance, from October 24 to November 11, 2001. Twelve 5-ft soil borings were advanced by hollow-stem auger at different locations throughout the bivouac area. Soil samples were collected from each soil boring at the surface and at 5 ft bgs. Four sediment samples were collected by shovel from various surface water drainages within the bivouac area. One sample was collected from each of four different drainage locations to the west and southwest of the bivouac area. Soil and sediment samples collected from GRTS-24 were analyzed for: EPA TCL for VOCs, EPA TCL for SVOCs, EPA TCL for pesticides and aroclors, EPA TAL for metals and cyanide, TPH, and Nutrients.

Results of the SI indicated no contamination exists above human health and ecological screening levels. Results can be found in the final SI Report completed October 2003. EPA and UDEQ approved the final SI Report in October 2003.

No further action is required. No Decision Document was necessary since a removal or remedial action was not required. Site close out documentation will be included in the overall GRTS Final Close Out Report in FY2005.

Schedule

PAST MILESTONES

IRP PHASE	COMPLETION DATE
PA Completion	MAR 1999
RA/REM:	
GRTS-01, Tailings Pond/Pile at Milling Plant	JAN 1988
GRTS-02, UST Containment Area (REM)	FY 1990
GRTS-07, Former Ore Bins	JAN 1989
GRTS-08, Waste Oil Storage (REM)	SEP 1996
GRTS-09, Uranium Ore Milling Plant	APR 1988
GRTS-12, Wind Blown Contamination Area	JUL 1988
GRTS-20, Transformers at Athena Launch Site (REM)	FY 1998
GRTS-22, Computer Debris/Spent Ammo/POL (REM)	FY 1998
GRTS-03, 04, 05, 11, 13, 17, 18, 19, 20, and 23, Site Fencing (REM)	FY 2001
GRTS-05, 10, 13, 16, 17	FY 2004
SI Completion	FY 2003

PROJECTED MILESTONES

Phase Completion Milestones: Site Closeout in FY05

ROD/DD Approval Dates: GRTS-10/13 DD in FY05

Construction Completion: 2005

Completion Date of all RA(C) Activities: 2005

Completion Date of IRP (including LTM phase): 2005

PRIOR YEAR FUNDING

Prior year IRP funding received by GRTS and estimates of current and projected funding are broken down by fiscal year and phase.

PRIOR YEAR FUNDS:

FY96	$ 100K
FY97	N/A
FY98	$ 500K
FY99	White Sands did not require IRP funds for FY99.
FY00	White Sands did not require IRP funds for FY00.
FY01	White Sands did not require IRP funds for FY01.
FY02	$ 800K
FY03	$ 129K
FY04	$1,474.8 K
Total Prior Year Funds	**$3,003,800**

CURRENT YEAR FUNDING

Estimated Costs:

FY05	GRTS-05	LTM	$94,122

Total Current Year Funds **$ 94,122**

FUTURE YEAR FUNDING

TOTAL FUTURE REQUIREMENTS: $0

TOTAL IRP PROGRAM COSTS: $3,097,922

Community Involvement

Status of Community Involvement

The surrounding community for GRTS includes the City of Green River (population approximately 900). In FY98, a proactive public relations program was initiated for the City of Green River and surrounding areas. The program was initiated at the beginning of PA activities and will continue until the completion of all remedial activities. An informal article was submitted to the local newspaper, Price Sun Advocate. The first article contained a brief description of the site and background information regarding former activities conducted at the site. A discussion of the activities to be conducted as part of the PA and SI were included.

In the fall of 2000, WSMR received an inquiry from the office of Utah Senator Orin Hatch concerning the future use of GRTS and the City of Green River's interest in acquiring the GRTS cantonment area. Department of the Army reported to Senator Hatch that the cantonment area is excess to the needs of WSMR and would initiate the process to excess this area. The transfer of the cantonment area should not impact remedial activities to be conducted at GRTS. This issue continues to be worked by the WSMR Master Planning office as a separate action from the IRP.

In May 2001, WSMR met with City of Green River, Emery County, and State of Utah representatives to discuss the SI at GRTS. Public meetings were also held in November 2003 and May 2004 (one each) to update the public on restoration activities. Many articles have been published in the Emery County Progress discussing WSMR activities at GRTS including articles covering the topics presented at the 2003 and 2004 public meetings.

Determining Interest In Establishing RAB

1. Efforts Taken To Determine Interest

WSMR has not conducted any specific activities to determine potential interest in establishing a RAB. However, current public relation efforts do not warrant establishing an official RAB.

2. Follow-up Procedures

WSMR is committed to involving the public in its restoration program and recognizes that interest in restoration activities can change. WSMR continues to participate in articles in the local newspaper, Emery County Progress, to serve as progress reports outlining remedial activities conducted to date and to solicit public involvement. A public meeting was held at the City of Green River on November 13, 2003 to discuss results of the Site Investigation and future WSMR actions. An additional public meeting was held May 18, 2004 to update the public on restoration activities. An additional meeting is planned for June 2005 as WSMR closes out IRP activity at GRTS.

There is no formal RAB for GRTS. WSMR will continue with a proactive public relations program that includes publication of informative articles in local newspapers, meeting with city officials, and hosting public meetings as necessary. Completion of the GRTS IRP is scheduled for early FY06; therefore, there is little to no need for a RAB or public interest survey to establish a RAB.

Interest in the Technical Assistance for Public Participation (TAPP) Program

N/A